Title: FLOW CONTROL AND CONGESTION CONTROL IN A DATA DISTRIBUTION NETWORK

REMARKS

Applicant has carefully reviewed and considered the Final Office Action mailed on December 24, 2008. By virtue of this amendment, claims 1-11, 15-18, and 21-26 are amended, claims 27-30 are cancelled with prejudice or disclaimer, and new claims 31-34 are added. No new matter has been added by this amendment. Thus, claims 1-26 and 31-34 are pending in this application, with claims 1, 11, 21, 24, 31, and 33 being independent.

Claims 1-21, 23, 24, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Erimli (US Patent No. 6,980,520). Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erimli (US Patent No. 6,980,520) in view of Leach, JR. et al (US Patent Pblication No. 2002/0089994).

Claim 1 recites:

A method of managing flow of datagram traffic, the method comprising:

receiving datagrams from a first port of a first device at a first port of a second device using a pathway that is operably connected to a second port of the first device and a second port of the second device:

determining, at the second device, an individual port on the first device that is causing oversubscription of the first port of the second device;

transmitting a pause frame from the second device to the first device, the pause frame causing the individual port to pause transmission of the datagrams using the pathway; and

receiving datagrams from a third port of the first device at the first port of the second device using the pathway, while the individual port on the first device is paused.

Erimli does not disclose at least the limitation of, "determining, at the second device, an individual port on the first device that is causing oversubscription of the first port of the second device." Instead, Erimli discloses, "Source-Based Flow Control Across Multiple Devices ... The present invention is directed to a source-based flow control mechanism in a network device, such as multiport switch 180. The present invention modifies a conventional MAC control pause frame to include a source address field relating to the source of the congestion. The multiport switch 180 ... identifies a source address associated with a congestion condition and transmits a MAC control pause frame including the identified source address. A second switch receives the

Title: FLOW CONTROL AND CONGESTION CONTROL IN A DATA DISTRIBUTION NETWORK

MAC control pause frame and suspends transmission to multiport switch 180 of data frames having the source address included in the pause frame. The second switch may also identify the port associated with the source address included in the pause frame. The second switch may then transmit a similar MAC control pause frame on the port associated with the source address." Erimli further discloses, "(t)he multiport switch 180A may then transmit the MAC control pause frame 600 (including source address field 610)...(t)he multiport switch 180B may also perform an address lookup operation to identify ht eport associated with the source address in source address field 610" (of the MAC control pause frame).

Thus, Erimli discloses that a receiving device (180A in Erimli) sends a pause frame including a source address field to a transmitting device (180B in Erimli), and then the transmitting device identifies a port associated with the source address.

In contrast, claim 1 recites a receiving (second) device that determines an individual port on the first device that is causing oversubscription of the first port of the second device, and sends a pause frame to pause that individual port. Since Erimli does not disclose a device that performs at least both of these functions, Erimli does not anticipate at least this element of claim 1, so that independent claim 1, as well as dependent claims 2-10, are allowable for at least these reasons.

Independent claims 11, 21, 24, 31, and 33 recite the same or similar features, and are thus allowable for at least the same reasons, along with their respective dependent claims. In addition, claim 11 recites,

> A method of managing flow of datagram traffic, the method comprising:

receiving datagrams from a first port of a first device at a first port of a second device using a pathway that is operably connected to a second port of the first device and a second port of the second device;

determining, at the second device, an individual port on the first device that is causing oversubscription of the first port of the second device:

signaling the first port of the first device to continue sending datagrams to the first port of the second device at a reduced rate, based on the determining when an over-subscription is detected at the first port of the second device; and

Title: FLOW CONTROL AND CONGESTION CONTROL IN A DATA DISTRIBUTION NETWORK

receiving datagrams from a third port of the first device at the first port of the second device using the pathway that is operably connected to the second port of the first device and the second port of the second device, while continuing to receive the datagrams at the reduced rate from the first port of the first device at the first port of the second device.

According to the Office Action, Erimli discloses "...Column 1, lines 54-64 disclose a pause response that is sent to the first to stop the transmission through specific address/port. Pausing causes device to reduce throughput through the port in question. Also see Fig. 5); and transferring datagrams from a third port of the first device (Column 2, lines 10-19. disclose sending data from the input of the first device to the output of the first device and then to the second device. Also see Fig. 3) to the first port of the second device using the pathway that is operably connected to the second port of the first device and the second port of the second device, while the first port of the first device is sending fewer datagrams to the first port of the second device (Column 2, lines 10-24 disclose sending data from the input of the first device to the output of the first device and then to the second device. Pausing causes device to reduce throughput through the port in question. Also see Fig. 3, Fig. 5, and column 1 I, lines 17-28)."

Thus, the Office Action admits that Erimli merely discloses use of a pause frame and makes a semantic argument that this is equivalent to receiving fewer datagrams because "(p)ausing cause device to reduce throughput through the port in question." Without agreeing with this line of reasoning, Applicant submits that no reading of Erimli may be said to disclose, "signaling the first port of the first device to continue sending datagrams to the first port of the second device at a reduced rate ...; and receiving datagrams from a third port of the first device at the first port of the second device ... while continuing to receive the datagrams at the <u>reduced rate</u> from the first port of the first device at the first port of the second device." That is, no semantic argument may reasonably be made that equivocates the pause frame of Erimli with a request/command to "...continue sending datagrams (at a reduced rate)," as recited in claim 11.

Consequently, claim 11 is believed allowable for at least these reasons, so that dependent claims 12-20 are believed allowable for at least the same reasons. Moreover, independent claims 24 and 33 recite the same or similar features, so that they, and their respective dependent claims, are allowable for at least the same reasons.

Serial Number: 10/825,654 Filing Date: April 16, 2004 Title: FLOW CONTROL AND CONGESTION CONTROL IN A DATA DISTRIBUTION NETWORK Dkt: 0063-108001/BU3040

Conclusion

Applicant believes that all the application is condition for examination on the merits and respectfully requests such examination. The Examiner may telephone Applicant's attorney (202-470-6452) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-3521.

Respectfully submitted,
Brake Hughes Bellerman LLP

Date April 30, 2009 By: /William G. Hughes/

William G. Hughes Reg. No. 46,112